TIGGER Transit Investments for Greenhouse Gas and Energy Reduction

U.S. Department of Transportation
Federal Transit Administration

Courtesy of Community Transit

Project name: Community Transit Hybrid Bus Project

Transit agency: Community Transit

Location: Everett, Washington

TIGGER goal: Energy and GHG emissions reduction

FTA region number: X

Award amount: $3,000,000

Congressional district: WA-1 and WA-2

Funding mechanism: Recovery Act (ARRA)

Community Transit Adds 15 Hybrid Buses to its Fleet

When Community Transit needed to replace 15 older diesel buses at the end of their service life, the transit agency looked to the TIGGER Program to cover the incremental cost—$200,000 per bus—of adding hybrid propulsion systems to the new buses it planned to purchase.

Vehicle Project

Thanks to $3 million in TIGGER funding, Community Transit will soon operate 15 new 40-ft buses—with hybrid drive systems made by BAE Systems—on local routes with plenty of stop-and-go traffic and limited highway travel. The hybrid's regenerative braking system is ideally suited for this type of operation, and the new buses are expected to be 30% more fuel efficient than the conventional diesel buses that previously served these routes.

Manufactured by New Flyer Industries, the hybrid buses are powered by an internal combustion clean diesel engine paired with a generator, electric motor, and electric storage system. Lithium-ion batteries provide energy storage to reduce engine demands and

Community Transit provides service within Snohomish County in Washington state. The service area covers 1,305 square miles and serves 516,099 people. Community Transit operates 30 local routes, including the Swift bus rapid transit system, the transit agency's highest-ridership route. Community Transit also operates 23 commuter routes with service to Seattle, and a vanpool program with 396 active groups that carry approximately 3,000 passengers each weekday. Additionally, the Community Transit DART paratransit service provides mobility to an average of 700 passengers a day. In 2010, the transit agency recorded 9.6 million passenger boardings. Community Transit owns and operates 272 buses ranging in length from 30 feet to 60 feet (articulated).

Courtesy of Community Transit

This diesel-electric hybrid bus manufactured by New Flyer Industries for Community Transit utilizes a BAE hybrid drive system.

enable the use of a smaller engine, which increases fuel efficiency during highway operation as well.

The smaller engine meets new near-zero emissions requirements and offers lower operating and life-cycle costs and improved on-road performance. The hybrid buses also include energy-efficient LED lighting, replacing standard filament and fluorescent lights inside and out.

These state-of-the-art buses produce 95% less particulate matter and 30% fewer greenhouse gas emissions than standard diesel buses. In addition to improving air quality and saving energy and money, the hybrid drive system is adaptable to new technology developments that could lead to further emission reductions and fuel savings in the future.

Impact:

Community Transit's new hybrid buses produce 95% less particulate matter and 30% fewer greenhouse gas emissions than standard diesel buses.

The new hybrid buses are also helping Community Transit pave the way for increased demand of this commercially available technology by serving as an example for other transit agencies across the United States.

Community Transit received its first hybrid bus in April 2011 and plans to put all of the hybrid buses into service by September 2011.

About TIGGER

The Transit Investment for Greenhouse Gas and Energy Reduction (TIGGER) Program *was established in 2009 by the U.S. Department of Transportation's Federal Transit Administration (FTA). Designed to reduce energy use and greenhouse gas emissions in transit agencies around the country, the TIGGER Program made funds available for capital investments that would reduce greenhouse gas emissions or lower the energy use of public transportation systems. An initial $100 million in American Recovery and Reinvestment Act grants funded 43 competitively-selected transit projects. In 2010, the FTA provided an additional $75 million in grants to fund 27 new TIGGER projects. These 70 projects are employing a variety of technologies to meet the program goals, including solar installations, building efficiency improvements, wind technology, wayside energy storage for rail, and purchase of more efficient buses. In fiscal year 2011, FTA provided an additional $49.9 million to continue the program.*

For More Information

Community Transit:
www.commtrans.org

FTA TIGGER:
www.fta.dot.gov/TIGGER

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U.S. Department of Transportation
Federal Transit Administration
1-866-377-8642

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